REMARKS

Reconsideration of the above-referenced application in view of the following remarks is respectfully requested.

Claims 1-6, 10-12, 14, 17, and 26-32 are pending in this application. Claims 14 and 26 are amended herein.

Claims 1-5, 10-12, and 29 stand rejected under 35 U.S.C. 102(b) as being anticipated by Wark, et al. (U.S. Patent No. 5,929,521). Claim 1 includes the feature of "at least one conductive member formed on each of said multiplicity of conductive pads and extending away from said working surface, said at least one conductive member comprising a wire bonder stud bump." Wark does not disclose or suggest a conductive member comprising a wire bonder stud bump. Therefore, Applicant respectfully submits that Claim 1 is patentable over Wark. Claims 2-5, and 10-12 depend from Claim 1 and are therefore patentable over Wark for at least the reasons presented above.

Claim 29 includes the feature of "a plurality of wire bonder stud bumps on at least one of said plurality of pads, whereby said stud bumps form a nest for contacting one of said solder ball interconnects." Wark does not teach or suggest such a feature. Therefore, Applicant respectfully submits that Claim 29 is patentable over Wark. Claims 30-32 depend from Claim 29 and are therefore patentable over Wark for at least the reasons presented above for that claim.

Claims 26-28 stand rejected under 35 U.S.C. 102(b) as being anticipated by Khandros (U.S. 5, 476,211). Claim 26, as amended, includes the feature wherein "said conductive members formed on said conductive pads positioned on said support substrate to make an electrical connection with said peripheral area of said solder-ball contacts of a circuit placed against said apparatus." Khandros does not teach or suggest such a feature. Khandros teaches

overcoating a wire skeleton 30 with a solder mass 42 (See Figs. 4 and 5, as well as the text at col. 9, lines 49-55). Since the structures taught by Khandros are already covered by a solder mass, they would be unsuitable for contacting a solder ball contact. From Khandros's comments at col. 9, lines 38-48, it is clear that Khandros's structures are intended as *replacements for* solder ball contacts, not as a means for establishing an electrical connection with a solder ball contact. Therefore, Applicant respectfully submits that Claim 26 as amended is patentable over Khandros. Claims 27 and 28 depend from Claim 26 and are therefore patentable over Khandros at least by virtue of their dependence from a patentable base claim. Note also, that with respect to Claim 28, Khandros does not teach that a raised point of wire supported by mold compound. The Examiner points to Khandros's Figure 5 for support of the rejection of Claim 28, but Figure 5 does not show mold compound. Note that element 42 is solder.

Claim 14 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Wark in combination with Umeda (JP 05-166811). Claim 14 as amended includes the feature "wherein one or more of said conductive members comprise wire bonder stud bumps bonded on top of another wire bonder stud bump, said wire bonder stud bumps bonded on top having the same composition as said another wire bonder stud bump." Wark is completely unrelated to wire bonding. Therefore, one skilled in the art would have no motivation to combine the teachings of Umeda with those of Wark. Umeda is also deficient. Note that element 4 in Umeda's Figure 2 is a stud bump of solder, while stud bump 3 is gold. Umeda's bumps therefore do not have the same composition as described in Claim 14. Therefore, Applicant respectfully submits that Claim 14 is patentable over Wark in view of Umeda.

Claims 1-6, 10-12, 17, and 29-32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over King, et al. (U.S. Patent No. 6,208,027). The Examiner also appears to rely on Beaman, although the rejection is not explicitly based on Beaman. Claim 1 includes the features of "at least one conductive member

formed on each of said multiplicity of conductive pads and extending away from said working surface, said at least one conductive member comprising a wire bonder stud bump; and said conductive members formed on said conductive pads positioned on said support substrate to make an electrical connection with said peripheral area of said solder-ball contacts or connection points of a circuit placed against said apparatus". The Examiner acknowledges that King does not teach or suggest the use of wire bonder stud bumps and cites Beaman to cure this deficiency of King. However, Beaman teaches that the wire stud 61 penetrates solder balls (col. 5, lines 58-60, col. 6, lines 1-10). Thus, Beaman teaches away from a combination with King's bump nest. Claim 17 includes the features of "at least three conductive lengths of wire extending away from said working surface bonded to a selected one of said multiplicity of conductive pads by a wire bonding machine to form an interconnecting nest; and
said interconnecting nest positioned on said support substrate to receive a solder-ball contact point and making an electrical connection with said peripheral area of said received solder-ball for testing said circuitry". Applicant's arguments above with respect to Claim 1 apply as well to the rejection of Claim 17. Claim 29 includes the feature of "a plurality of wire bonder stud bumps on at least one of said plurality of pads, whereby said stud bumps form a nest for contacting one of said solder ball interconnects." Again, King does not teach or suggest the use of wire bonder stud bumps. Beaman's teaching of a wire stud penetrating solder balls is a teaching away from a combination with King's teaching of a bump nest. Therefore, Applicant respectfully submits that Claims 1, 17, and 29 are patentable over King in view of Beaman. Claims 2-6, 10-12, and 30-32 depend from these claims and are therefore patentable over King in view of Beaman by virtue of their dependence from patentable base claims.

Claim 14 stands rejected under 35 U.S.C. 103(a) as being unpatentable over King and Beaman, and further in combination with Umeda. Claim 14 as amended includes the feature "wherein one or more of said conductive members comprise wire bonder stud bumps bonded on top of another wire bonder stud

bump, said wire bonder stud bumps bonded on top having the same composition as said another wire bonder stud bump." Claim 14 depends from Claim 1 and is therefore patentable over King in view of Beaman for the reasons presented above. In addition, element 4 in Umeda's Figure 2 is a stud bump of solder, while stud bump 3 is gold. Umeda's bumps therefore do not have the same composition as described in Claim 14. In view of the fact that the combined references do not teach or suggest all of the claimed features, Applicant respectfully submits that Claim 14 is patentable over the cited references.

Applicant respectfully requests reconsideration and withdrawal of the rejections and allowance of Claims 1-6, 10-12, 14, 17, and 26-32. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicant's attorney at the below listed telephone number and address.

Respectfully submitted,

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